

Claims:

I claim:

1. A thin motor comprising:

- installing a number of elemental movement generator means on a surface;
- installing an actuator means on said surface;
- installing transferring means to connect all said elemental movement generator means and said actuator means so that the movement of said elemental movement generator means is transferred to said actuator on said surface; and
- installing controller means to control the movement of each said elemental movement generator means on said surface;

so that said controller means can make each said elemental movement generator means move and stop at desired moments of time and in the desired direction; the movement of each said elemental movement generator means is transferred to said actuator; and said actuator moves and stops at desired moments of time and in the desired direction.

2. The thin motor of claim 1 wherein:

- each said elemental movement generator means is a linear motor;

so that the movement of each said linear motor starts and stops at desired moments of time and in the desired direction; the movement of said linear motors is transferred to said actuator; said actuator moves and stops at desired moments of time and in the desired direction.

3. The thin motor of claim 1 wherein:

- each said elemental movement generator means is a rotational motor;
so that the movement of each said rotational motor starts and stops at desired moments of time and in the desired direction; the movement of said rotational motors is transferred to said actuator; said actuator moves and stops at desired moments of time and in the desired direction.

4. The thin motor of claim 2 wherein:

- each said linear motor is composed of a moveable magnet rod in a fixed coil;
so that said controller means applies current to each said coil and stop doing it at desired moments of time; each said coil generates electromagnetic field to push and pull said magnet rod; the movement of said magnet rod is transferred to said actuator; said actuator moves and stops at desired moments of time and in the desired direction.

5. The thin motor of claim 2 wherein:

- each said linear motor is composed of a moveable coil in a fixed coil;
so that said controller means applies current to each pair of said moveable coil and said fixed coil and stop doing it at desired moments of time; both said fixed coil and said moveable coil generate electromagnetic fields so that said fixed coil pushes and pulls said moveable coil; the movement of said moveable coil is transferred to said actuator of said thin motor; said actuator moves and stops at desired moments of time and in the desired direction.

6. The thin motor of claim 1 wherein:

- each said elemental movement generator means is composed of a pair of a stator means and a mover means and they are close to each other;

so that said controller means can control each said pair of said actor means and said mover means to push and pull each other and stop doing it at desired moments of time; the movement of said mover means is transferred to said actuator of said thin motor; said actuator moves and stops at desired moments of time and in the desired direction.

7. The thin motor of claim 6 wherein:

- each said stator means is a coil; and
- each said mover means is a magnet rod;

so that said controller means applies current to each said coil and stop doing it at desired moments of time; each said coil generates electromagnetic field to push and pull said magnet rod; the movement of said magnet rod is transferred to said actuator of said thin motor; said actuator moves and stops at desired moments of time and in the desired direction.

8. The thin motor of claim 6 wherein:

- each said stator means is a magnet rod; and
- each said mover means is a coil;

so that said controller means applies current to each said coil and stop doing it at desired moments of time; each said coil generates electromagnetic field; each said coil is pushed and pulled by said magnet rod; the movement of said coil is transferred to said actuator of said thin motor; said actuator moves and stops at desired moments of time and in the desired direction.

9. The thin motor of claim 6 wherein:

- each said stator means is a fixed coil; and
- each said mover means is a moveable coil;

so that said controller means applies current to each pair of said fixed coil and said moveable coil and stops doing it at desired moments of time; each pair of said fixed coil and said moveable coil generate electromagnetic fields to push and pull each other; the movement of said moveable coil is transferred to said actuator of said thin motor; said actuator moves and stops at desired moments of time and in the desired direction.

10. The thin motor of claim 6 wherein:

- each said stator means is a coil; and
- each said mover means is an iron bar;

so that said controller means applies current to each said coil and stop doing it at desired moments of time; each said coil generates electromagnetic field to pull said iron bar; the movement of said iron bar is transferred to said actuator of said thin

motor; said actuator moves and stops at desired moments of time and in the desired direction.

11. The thin motor of claim 6 wherein:

- each said stator means is an iron bar; and
- each said mover means is a coil;

so that said controller means applies current to each said coil and stop doing it at desired moments of time; each said coil generates electromagnetic field; each said coil is pulled by said iron bar; the movement of said coil is transferred to said actuator of said thin motor; said actuator moves and stops at desired moments of time and in the desired direction.

12. A thin pump comprising:

- installing a thin motor on a surface;
- installing a thin or small reservoir with plunger and piston on said surface; and
- installing a transferring means to transfer the movement of the actuator of said thin motor to said plunger of said reservoir;

so that said actuator drives said plunger to move; said plunger drives said piston of said reservoir; and desired amount of fluid is drawn into said reservoir and is pressed out of said reservoir at desired moments of time.